

- 45 -

WHAT IS CLAIMED IS:

1. A composition comprising a therapeutic or diagnostic agent and a supramolecular complex, said complex comprising as constituents (i) a block copolymer, having at least one nonionic, water soluble segment and at least one polyionic segment, and (ii) at least one charged surfactant having hydrophobic groups, the charge of said surfactant being opposite to the charge of the polyionic segment of said block copolymer, the constituents of said complex being bound by interaction between said opposite charges and between surfactant hydrophobic groups, and with the proviso that when said therapeutic or diagnostic agent is an ionic substance having a net charge opposite to the charge of said block copolymer, the net charge of said therapeutic or diagnostic agent is no more than 10.
2. A composition as claimed in claim 1, wherein said therapeutic or diagnostic agent comprises about 0.1 to about 99.9 weight percent of said composition.
3. A composition as claimed in claim 1, wherein the ratio of the net charge of said surfactant to the net charge of the polyionic segment present in said block copolymer constituent of said complex is between about 0.01 and about 100.
4. A composition as claimed in claim 3, wherein said charge ratio is between about 0.1 and about 10.

- 46 -

5. A composition as claimed in claim 3,
wherein the polyionic segment of said block copolymer
is polyanionic.

5 6. A composition as claimed in claim 5,
wherein the nonionic segment of said block copolymer
is selected from the group consisting of
polyetherglycols, copolymers of ethylene oxide and
propylene oxide, polysaccharides, and homopolymers and
10 copolymers of vinyl compounds selected from the group
consisting of acrylamide, acrylic acid esters,
methacrylamide, methacrylic esters, N-(2-
hydroxypropyl)methacrylamide, vinyl alcohol, vinyl
pyrrolidone, vinyl triazole, or the N-oxide of
15 vinylpyridine, polyorthoesters and polyamino acids.

20 7. A composition as claimed in claim 5,
wherein said polyanionic segment is selected from the
group consisting of polymethacrylic acids and its
salts, polyacrylic acid and its salts, copolymers of
methacrylic acid and its salts, copolymers of acrylic
acid and its salts, heparin, poly(phosphate),
polyamino acid, polymaleic acid, polylactic acid,
nucleic acid or carboxylated dextran.
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~~Sub A~~ 8. A composition as claimed in claim 5,
wherein said polyanionic segment is a homopolymer or a
co-polymer prepared from a monomer which polymerizes
to form a product with carboxyl pendant groups, said
monomer being selected from the group consisting of
30 acrylic acid, aspartic acid (amino acid), 1,4-
phenylenediacrylic acid citraconic acid, citraconic
anhydride, trans cinnamic acid, 4-hydroxy-3-methoxy
cinnamic acid, p-hydroxy cinnamic acid, trans-
35 glutaconic acid, glutamic acid (amino acid), itaconic
acid, linoleic acid, linolenic acid, methacrylic acid,

47

- 47 -

maleic acid, maleic anhydride, mesaconic acid, trans-
β-hydromuconic acid, trans-trans muconic acid, oleic
acid, ricinoleic acid, 2-propene-1-sulfonic acid, 4-
styrene sulfonic acid, trans-traumatic acid,
5 vinylsulfonic acid, vinyl phosphate acid, vinyl
benzoic acid, vinyl glycolic acid.

9. A composition as claimed in claim 5,
wherein said surfactant is selected from the group
10 consisting of lipophilic quaternary ammonium salts,
lipopolyamines, lipophilic polyamino acids, lipophilic
primary-, secondary-, tertiary- and heterocyclic
amines, lipophilic imidazoles, lipophilic piperidinium
salts, lipophilic quinaldinium salts, lipophilic
15 azonium and azonium salts, pH-sensitive cationic
lipids, dicationic bolaform electrolytes or a mixture
of said surfactants.

10. A composition as claimed in claim 5,
20 further including a nonionic surfactant.

11. A composition as claimed in claim 10,
wherein said nonionic surfactant is selected from the
group consisting of dioleoyl phosphatidylethanolamine,
25 dioleoyl phosphatidylcholine, or a mixture of said
nonionic surfactants.

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12. A composition as claimed in claim 3,
wherein the polyionic segment of said block copolymer
30 is polycationic.

13. A composition as claimed in claim 12,
wherein said polycationic segment is selected from the
group consisting of polyamino acid, alkanolamine
35 esters of polymethacrylic acid, polyamines,
polyalkyleneimines, polyvinyl pyridine and quaternary

- 48 -

ammonium salts of said polycationic segments.

July 11/2 14. A composition as claimed in claim 12,
comprising an anionic surfactant selected from the
group consisting of alkyl sulfates, alkyl sulfonates,
fatty acid soaps, salts of hydroxy-, hydroperoxy-,
polyhydroxy-, epoxy- fatty acids, salts of mono- and
polycarboxylic acids, prostanoic acid and
prostaglandines, leukotriens and lipoxines, alkyl
phosphates, alkyl phosphonates, lipids, sodium-dialkyl
sulfosuccinate, n-alkyl ethoxylated sulfates, cholate
and desoxycholate of bile salts, perfluorocarboxylic
acids, fluoroaliphatic phosphonates, fluoroaliphatic
sulphates.

15 15. A composition as claimed in claim 1, in
the form of vesicles, said vesicles having an internal
volume containing said therapeutic or diagnostic
agent.

20 16. A composition as claimed in claim 1,
wherein said therapeutic or diagnostic agent is a
charged species, having a positive or negative charge.

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phone call* 16 17. A composition as claimed in claim 1,
wherein said therapeutic or diagnostic agent is a
constituent of said supramolecular complex.

30 18. A composition as claimed in claim 1,
wherein said therapeutic or diagnostic agent is
selected from the group consisting of analgesic
agents, anti-inflammatory agents, antibacterial agents,
antiviral agents, antifungal agents, antiparasitic
agents, tumorcidal or anti-cancer agents, proteins,
35 toxins, enzymes, hormones, neurotransmitters,
glycoproteins, immunoglobulins, immunomodulators,

401

- 49 -

dyes, radiolabels, radio-opaque compounds, fluorescent compounds, polysaccharides, cell receptor binding molecules, anti-glaucous agents, mydriatic compounds and local anesthetics.

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